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A KEY TO THE NORTH AMERICAN SPECIES OF LENTINUS—II *

BY F. S. EARLE

Section LEPIDEI

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|--|---------------------------------------|
| 1. Large; pileus reaching 15 cm. or more. | 2. |
| Medium; pileus 4-10 cm. | 4. |
| Small; pileus less than 4 cm. | 5. |
| 2. Pileus straw-colored with black punctate scales. | <i>L. maximus</i> Johns. |
| Pileus white or whitish, areolate-scaly. | 3. |
| 3. Stipe excentric; cespitose; spores $13-16 \mu \times 5-6 \mu$. | <i>L. Underwoodii</i> Pk. |
| Stipe central; gregarious; spores $8 \mu \times 4 \mu$. | <i>L. magnus</i> Pk. |
| 4. Pileus 5-10 cm., scales spot-like, brown; spores $10-14 \mu \times 6 \mu$. | <i>L. lepidus</i> Fr. |
| Pileus 4-6 cm., scales punctate, black; spores $6-7 \mu \times 3 \mu$. | <i>L. tigrinus</i> (Bull.) Fr. |
| 5. Pileus sulcate-striate, reddish. | <i>L. sulcatus</i> Berk. |
| Pileus even on the margin. | 6. |
| 6. Cespitose; pileus yellowish to ferruginous, pilose-squamose. | <i>L. pholiotoides</i> Ell. & Anders. |
| Scattered; pileus brownish, punctate-squamose. | <i>L. Ravenelii</i> B. & C. |

Section COCHLEATI

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|--|---|
| 1. Stipe glabrous. | 2. |
| Stipe velvety or strigose, at least below. | 6. |
| 2. Cespitose. | 3. |
| Scattered or only gregarious. | 5. |
| 3. Lamellae brownish, edge white; stipe hollow. | <i>L. friabilis</i> Fr. |
| Lamellae whitish; stipe solid. | 4. |
| 4. Lamellae with the edge serrate. | <i>L. cochleatus</i> Fr. |
| Lamellae with the edge entire. | <i>L. cochleatus occidentalis</i> Fr. |
| 5. Pileus deeply umbilicate; stipe concolorous. | <i>L. umbilicatus</i> Pk. |
| Pileus expanded or subdepressed; stipe short, shining reddish-brown. | <i>L. haematopus</i> Berk. |
| 6. Pileus infundibuliform. | 7. |
| Pileus depressed or umbilicate. | 8. |
| 7. Small; pileus 12-13 mm.; lamellae entire. | <i>L. Curtisii</i> Sacc. & Cub. |
| Larger; pileus 2-3 cm.; lamellae serrate. | (= <i>L. omphalodes</i> B. & C., not Fr.)
<i>L. Americanus</i> Pk. |
| 8. Pileus ochraceous; stipe dark brown. | <i>L. Michneri</i> B. & C. |
| Pileus alutaceous-fusous; stipe pallid. | <i>L. detonsus</i> Fr. |

* Continued from page 38.

Section CORNUCOPIOIDES

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| 1. Stipe glabrous. | 2. |
| Stipe not glabrous. | 5. |
| 2. Pileus pallid. | 3. |
| Pileus ochraceous, 6-10 cm.; lamellae fulvous. | <i>L. patulus</i> Lév. |
| Pileus dark brown. | 4. |
| 3. Pileus membranous, flaccid. | <i>L. flaccidus</i> Fr. |
| Pileus fleshy-coriaceous, rigid. | <i>L. glabratus</i> Mont. |
| 4. Stipe striate; pileus 5 cm. | <i>L. fuliginus</i> B. & C. |
| Stipe smooth; pileus 7-8 cm., papery. | <i>L. exilis</i> Klotzsch |
| 5. Cespitose. | 6. |
| Not cespitose. | 7. |
| 6. Small; pileus 2-3 cm.; stipe lanuginose. | <i>L. parvulus</i> B. & C. |
| Larger; pileus 7-10 cm.; stipe scaly. | <i>L. pallidus</i> B. & C. |
| 7. Pileus deeply infundibuliform or tubular. | <i>L. Robinsonii</i> Mont. |
| Pileus convex or plane. | 8. |
| 8. Stipe straight, longer than the diameter of the pileus. | <i>L. Mancinianus</i> Sacc. & Cub. |
| Stipe curved, shorter than the diameter of the pileus. | 9. |
| 9. Lamellae separating from the stipe when dry. | <i>L. Cubensis</i> B. & C. |
| Lamellae not separating from the stipe. | <i>L. proximus</i> B. & C. |

Sections PLEUROTII AND RESUPINATI

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|---|--|
| 1. Pileus dimidiate. | 2. |
| Pileus resupinate. | 9. |
| 2. Pileus strigose, velvety or scaly. | 3. |
| Pileus glabrous. | 5. |
| 3. Pileus thin, membranous, strigose, fusco-cervinus. | <i>L. pelliculosus</i> (Schw.) Fr. |
| Pileus thin, flabelliform, farinaceous-tomentose, white. | <i>L. Verae-Crucis</i> Berk. |
| Pileus soft, fleshy. | 4. |
| 4. Pileus corrugated; spores 1.5-2 μ . | <i>L. vulpinus</i> Fr. |
| Pileus even; spores 4 μ , rough. | <i>L. ursinus</i> Fr. |
| 5. Pileus white or whitish. | 6. |
| Pileus reddish or brownish. | 8. |
| 6. Pileus membranous; lamellae closely crowded. | <i>L. pectinatus</i> (Schw.) Fr. |
| Pileus fleshy. | 7. |
| 7. Pileus very large and thick (15 cm.); odor none. | <i>L. Chama</i> (Bosc) Fr. |
| Pileus smaller, thin; odor of <i>Melilotus</i> on drying. | <i>L. suavissimus</i> Fr. |
| 8. Pileus and lamellae reddish; pileus glabrous, subrugose. | <i>L. castoreus</i> Fr. |
| Pileus and lamellae reddish; pileus glabrate, thinner. | <i>L. castoreus pusillus</i> B. & C. |
| Pileus pale fuscous; lamellae paler. | <i>L. castoreus hirneoloides</i> B. & C. |
| 9. Pileus villous, cervinus, very thin; lamellae pallid. | <i>L. tenuissimus</i> (Schw.) Fr. |
| Pileus glabrous; lamellae white. | <i>L. proboscideus</i> Fr. |

EXCLUDED SPECIES

Lentinus caespitosus Berk. Hook. Lond. Jour. 6: 317. 1847.

This seems to be a *Clitocybe*, probably the same as *Clitocybe monodelpha* Morg.

Lentinus verrucosus (Kickx) Sacc. Syll. Fung. 5: 613. 1887.

This is a *Lenzites*; see Bull. Acad. Sci. Brux. 8²: 73. 1841; also, Sacc. Syll. Fung. 9: 78. 1891.

NEW YORK BOTANICAL GARDEN.

EXPLOSIVE DISCHARGE OF ANTHEROZOIDS IN
CONOCEPHALUM.

BY CYRUS A. KING

In June, 1902, Dr. George J. Peirce published in the *Bulletin of the Torrey Botanical Club* some observations on the forcible discharge of the antherozoids of *Asterella Californica*.

He made the discovery in January, 1901, but in January, 1902, the subject was studied in more detail. He found that antherozoids were forcibly ejected under natural conditions as well as in the laboratory, and that in some cases they were thrown to a vertical height of 14–20 cm. The expulsion was found to be due to the increased turgidity of certain cells within the antheridium and of others in the cushion below it. The mutual pressure due to the increased turgidity in both regions produced the rupture above, where there was no external pressure on the antheridium.

F. Cavers (*Annals of Botany*, January, 1903) has noticed the expulsion of antherozoids also from *Conocephalum conicum* (*Fegatella conica*). His observations were made first in the laboratory and were confirmed later under natural conditions. He found that the antherozoids were thrown to a height of more than two inches and that the explosions were most frequent on moist, sunny days and when exposed to direct sunlight.

In March, 1901, the writer also observed the forcible expulsion of antherozoids from *Conocephalum conicum*. The material was growing in an experiment room at Indiana University and